



Tablet course

Chapter 3.2

5S Method

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„Innovative Learning Approaches for Implementation of Lean Thinking to Enhance Office and Knowledge Work Productivity”

ILA-LEAN Project No 2016-1-PL01-KA203-026293
2016-2018

2018



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Project Title



Innovative Learning Approaches for Implementation of Lean Thinking to Enhance Office and Knowledge Work Productivity

Project Number: 2016-1-PL01-KA203-026293

Disclaimer:

This project has been co-funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



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Objective

The objective of this chapter is to present how 5S method can be implemented and why it is important to apply 5S in office and knowledge work.



Content

1. The origins of the method
2. Where do we start from?
3. 5S benefits
4. Example of 5S application to services
5. Steps of 5S implementation
6. When 5S Fail?
7. Centoform 5S game



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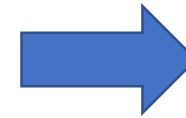
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THE ORIGIN OF THE 5S METHOD

A critical yet often overlooked area in the visual workplace is the starting point for continuous improvement.

The 5S steps are designed to improve efficiency, strengthen maintenance, and provide continuous improvement in all facets of a company's operations.



disastrous
consequences
for companies
that fail to
recognize its
value



little hope of
integrating
large-scale
changes such
as JIT or re-
engineering

Source: Hirano, Hiroyuki (1995). 5 Pillars of the Visual Workplace



WHERE DO WE START FROM?

Table 1: Weighted average results of the Lean production tools.

S.No	Tools	Weighted average	Ranking)
1	5S	1.153	1
2	OEE	1.164	2
3	8 step problem solving Method	1.219	3
4	Pareto Analysis	1.254	4
5	Elimination of Waste	1.318	5
6	Kaizen	1.329	6
7	Setup Time Reduction	1.351	7
8	Process Mapping	1.362	8
9	Value Stream Mapping (VSM)	1.461	9

Identification of High Impact Lean Production Tools in Automobile Industries
using Weighted Average Method
12° GLOBAL CONGRESS ON MANUFACTURING AND MANAGEMENT, GCMM 2014
- P. Arunagiria e A.Gnanavelbabub



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«5S» BENEFITS

- Reduce non-value adding activity
- Reduce mistakes from employees and suppliers
- Reduce time for employee orientation and training
- Reduce search time of facility management and locating tools, parts and supplies
- Reduce parts stored in inventory and associated inventory carrying costs
- Reduce unnecessary human motion and transportation of goods
- Improve floor space utilization
- Improve employees' safety and morale
- Improve product quality
- Extend equipment life through more frequent cleaning and inspection

Source: 5S / Visual Workplace Handbook - www.bradyid.com - 2011



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EXAMPLE OF 5S APPLICATION TO SERVICES

Project: pilot intervention of the 5S program implemented in a health facility in Senegal



Qualitative study: interview of 21 health center staff members 1 year after the pilot intervention.



Results: staff noticed changes in the quality of services (e.g. making services more efficient, patient-centered, and safe), and in the attitude and behaviour (staff and patients as well)

Implementation of 5S management method for lean healthcare at a health center in Senegal: a qualitative study of staff perception

By: Kanamori, Shogo ; Sow, Seydou ; Castro, Marcia ; Matsuno, Rui ; Tsuru, Akiko ; Jimba, Masamine
GLOBAL HEALTH ACTION

Volume: 8 Article Number: 27256 DOI: 10.3402/gha.v8.27256 Published: 2015



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5S IMPLEMENTATION



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SAFETY FIRST

1°S - SORT



2°S - SET IN ORDER



3°S - SHINE



4°S - STANDARDIZE



5°S - SUSTAIN





1°S SORT



JOB AID – 1°S SORT	
Definition Eliminate nonessential items from the workplace	Target outcome An uncluttered workplace
Action Steps <ul style="list-style-type: none"> - Identify a 5S project workplace - Eliminate unnecessary items from the workplace that are not needed for current operations; - Use visual methods such as red tagging to identify these unneeded items 	
Examples: Go through all the files, folders, documents, catalogues in the office and keep only essential items.	

Red Tag

Item Information

Date: _____ Tagged By: _____

Item Name: _____

Location: _____

Category

☐ Equipment ☐ Raw Materials
☐ Tools & Jigs ☐ Work-in-Process
☐ Finished Goods ☐ Other
☐ Gauges & Instruments
☐ Consumables
☐ Machine Parts

Reason for Red Tag

☐ Not Required ☐ Obsolete
☐ Defect ☐ Unknown object
☐ Scrap

Suggested Action Required

☐ Return to _____
☐ Scrap
☐ Relocate
☐ Sell

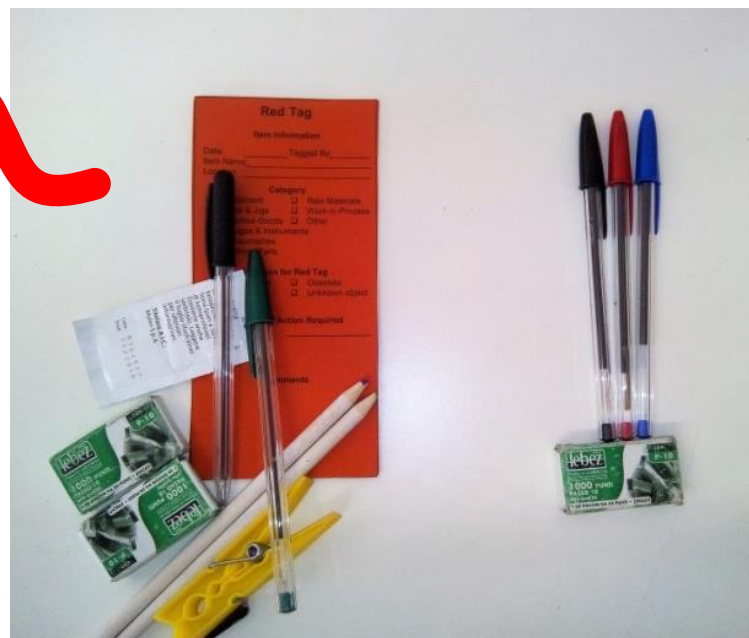
Comments



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1°S SORT IN OFFICE RED TAG CRITERIA

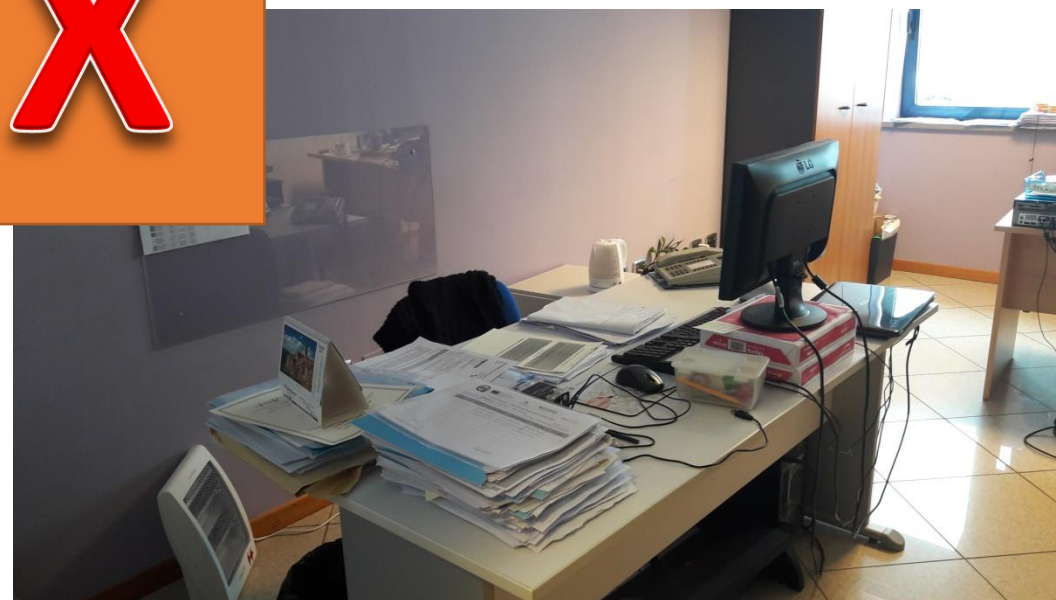
**USELESS
STUFF**





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1°S SORT IN OFFICE



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2°S STABILIZE (SET IN ORDER)

JOB AID – 2°S SET IN ORDER	
Definition Create a well-ordered and visually instructive workplace (“a place for everithing and everithing in its place”).	Target outcome A visual workplace that minimize wastes and human errors
Action Steps <ul style="list-style-type: none"> - Create efficient and effective storage/archive methods; - Arrange items so that they are easy to use and find; - Affix labels on folders; - Install modular shelving 	
Examples: Use dedicated locations, tools to clearly define priorities, reorder points, functional space management, etc.	



Surgeon's tray



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2°S STABILIZE (SET IN ORDER) IN OFFICE



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Examples of proper storage and archive locations



3°S SHINE



JOB AID – 3°S SHINE

Definition

Clean the work area

Target outcome

Daily cleaning follow up to sustain improvements

Action Steps

Clean floor, desks, bookshelves, lighting, windows and anything else that affects overall cleanliness

Examples:

Set a shine roster for cleaning activities in the area



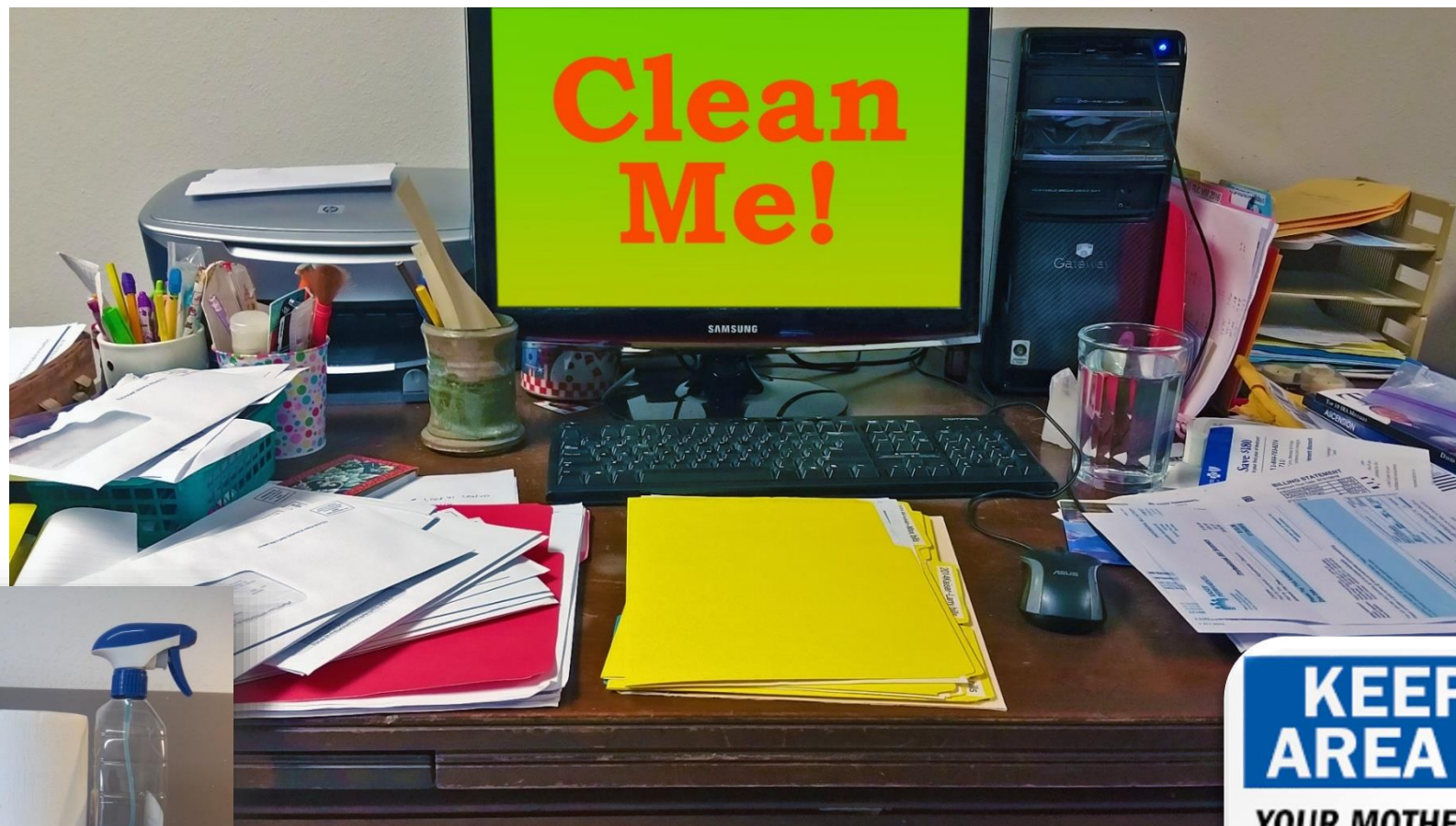


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3°S SHINE IN OFFICE



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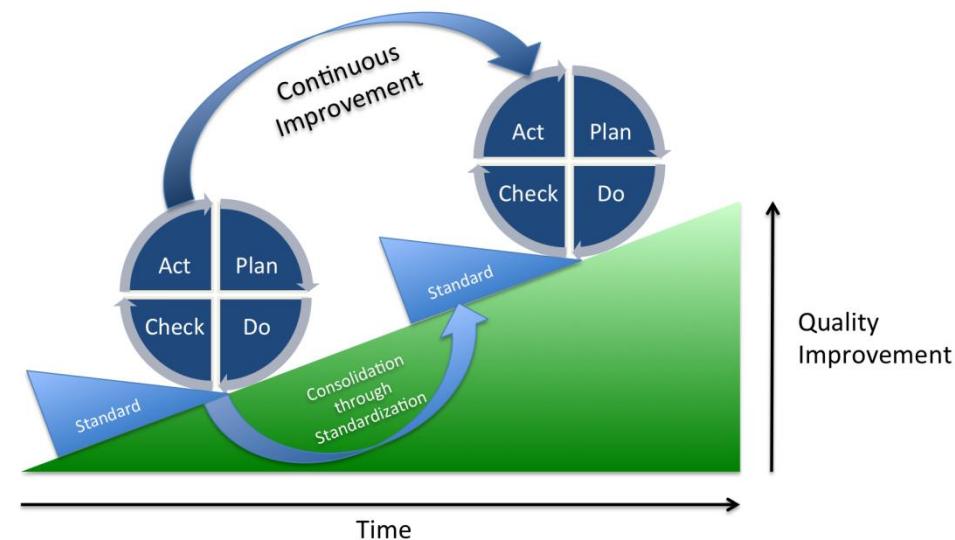
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4°S STANDARDIZE

JOB AID – 4°S STANDARDIZE	
Definition	Target outcome
Establish standards to maintain 5S improvements	Develop procedures to make this approach consistent
Action Steps	
<ul style="list-style-type: none"> - Brainstorm ideas for making the 5S changing standard operating procedure; - Update documentation to reflect changes; - Make sure all stakeholders are aware of the new standards 	
Examples:	
Visual aids, work instructions, information and training provided to stakeholders	



4°S STANDARDIZE IN OFFICE



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In **manufacturing** and **office** workplaces:

By documenting the current best practice, standardized work forms the baseline for “kaizen” or continuous improvement.

As the standard is improved, the new standard becomes the baseline for further improvements, and so on.

The goal is improving standardized work in a never-ending process.

Performance and new targets have to be communicated to all the staff through information boards, work instruction for newcomers, visual KPIs, etc..



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4°S STANDARDIZE IN OFFICE



**Procedures,
instructions and
KPIs are visible
and shared**



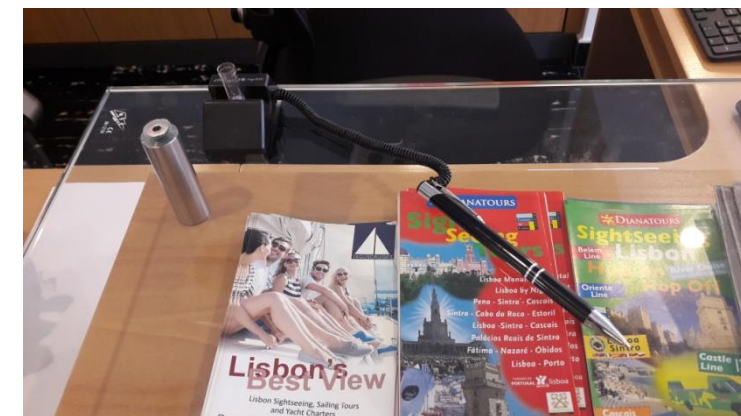
5°S SUSTAIN



JOB AID – 5°S SUSTAIN	
Definition Monitor, expand and refine 5S results	Target outcome Make a habit of mantaining correct procedures properly
Action Steps <ul style="list-style-type: none"> - Assign responsibilities; - Maintain a regular audit activity; - Share best practices between the areas 	
Examples: Audit forms, resources for communication and recognizing successes	



Leroy Merlin tools board



Hotel reception desk



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WORKPLACE ORGANIZATION





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WHEN 5S METHODOLOGY FAILS



BE ALL IN OR GET ALL OUT.
THERE IS NO HALFWAY

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WHEN 5S FAIL



«I have witnessed company after company comment they tried 5S in the past and it did not work for them.

Further investigation uncovered a consistent root cause for their failure.

They did not formalize the last two S's: standardize and sustain.

They called the initiative 5S when, in fact, it was really only 3S.»

C. D. Chapman

“Clean House With Lean 5S” (2005)

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LET'S GO TO THE MOVIES



«5S THAT
WORKS»

[Movie 1](#)

[Movie 2](#)

[Movie 3](#)

«5S FAIL»

[Movie 4](#)

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ARE YOU STILL NOT CONVINCED?



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Centoform 5S game

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CALCULATION OF THE INVESTMENT PAYBACK

Once familiar with the 5S methodology and with the game, it is recommended to perform the following exercise:

- Play the first round with the “BEFORE 5S” slideshow noting the number of cards with the right result and the time of “BEFORE 5S” slideshow.

Apply the following formula:

$$T1 = (\text{slideshow time “before 5S”}) / (\text{n° of cards produced})$$

- Apply the 5S to the physical and information environment noting the time spent to apply them (T2)
- Play a round using the “AFTER 5S” slideshow noting the number of cards with the right result and the time of “AFTER 5S” slideshow (T3).

Apply the following formula:

$$T3 = (\text{slideshow time “after 5S”}) / (\text{n° of cards produced})$$

The formula to find the Break-Even Point is $BEP = (T2) / (T1 - T3)$

It shows how to find a number of sheets/pieces produced above which the time requested to apply the 5 eases is already repaid.



WHAT WILL YOU LEARN IN THE GAME?

The objective of the game is:

- Show **WHAT** can be improved by 5S
- Show **HOW** it can be improved by 5S

By playing the game the participants will obtain competences in:

- Reducing non-value adding activities
- Reducing search time in navigating the facility
- Improving product quality



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